

F3F

# Proposal for a New Scoring Method



# FAI scoring formula

- F3F scoring is based on a comparison between the time of the run and the best time of the round:

$$\text{FAI} = 1000 * \text{Best Time} / \text{Pilot Time}$$

- Best time is used as the reference



# FAI scoring formula

- **The amount of points you get after your run depends on 3 parameters :**
  - Your skills ( the parameter we want to measure)
  - the flight conditions you get during your run (that induces the famous "lottery effect")
  - the flight conditions during the best run ( that induces what I call "the third man effect" and adds some additional "lottery effect" to your own run



# "Third Man Effect"

- The number of points you get depends on your run but it also depends on what happened during the best flight:
  - A "top pilot" got the "1000" with average conditions
  - A top pilot got the "1000" with "the thermal of the day"
  - An "average pilot" got the "1000" with a "standard" thermal



# "Third Man Effect"

Between these 2 pilots: Who is the winner ?

	round 1	FAI	round 2	FAI	round 3	FAI	round 4	FAI	Total
Pilot 1	45,0		45,0		50,0		50,0		0,0
Pilot 2	50,0		50,0		41,0		41,0		0,0

–Pilot 2 of course !

# "Third Man Effect"

- The real answer is : **we can't know !**
- The final ranking depends on the "third man" : the guy who wins the rounds

	round 1	FAI	round 2	FAI	round 3	FAI	round 4	FAI	Total
Pilot 1	45,0	977,8	45,0	977,8	50,0	740,0	50,0	760,0	2715,6
Pilot 2	50,0	880,0	50,0	<u>880,0</u>	41,0	<u>902,4</u>	41,0	926,8	2709,3
Best time	44,0		44,0		37,0		38,0		

	round 1	FAI	round 2	FAI	round 3	FAI	round 4	FAI	Total
Pilot 1	45,0	888,9	45,0	888,9	50,0	800,0	50,0	800,0	2577,8
Pilot 2	50,0	800,0	50,0	800,0	41,0	975,6	41,0	975,6	2751,2
Best time	40,0		40,0		40,0		40,0		

# "Third Man Effect"

- Because of "third man effect" today FAI scoring method may make the final ranking not coherent with the real man-on-man ranking
- The "third man effect" enhances the lottery effect



# New scoring method

- To reduce the "third man effect" it is proposed to replace the best time of the round by the **average time** of the round

$$\text{New} = 1000 * \text{Av. Time} / \text{Pilot Time}$$





# New scoring method

- **Using the average time instead of the best time makes the reference time much less sensitive to flying conditions**
- **Lottery effect due to third man effect is quite cancelled.** But lottery effect related to your own flight remains the same.



# New scoring method

- **It has been verified that both methods give quite the same ranking when flying conditions are stable**
- **Differences may occur when flight conditions are very variable** . They always make final ranking consistent with man on man ranking




# Group Scoring

- It is well known that group scoring can be dramatically unfair
- This is the case when a pilot get a huge thermal scaling down the scores of all other pilots in his group (but having no effect on the other group)



# Group Scoring

- **Exemple first 2010 competition in France** (only 3 rounds with group scoring in the third round)
  - **Alexis makes a 35s => only 2 pilots in his group are around 820pts and all the others have (much) less than 800**
  - **On the second day the air is much lighter but much more stable => in the second group more than half pilots have (much) more than 900pts**
  - **At the end of the comp all pilots in the top ten (except Alexis) were from group 2**
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# Group Scoring

- In case of group scoring the new scoring method is much fairer because in both groups the "average pilot" will get the same number of points (around 1000) whatever the best time is
- if some care has been taken to make both groups of equal value this result is very equitable



# Conclusion

- It is proposed to use the "average time" instead of the "best time" in the F3F scoring formula
- This modification has two advantages :
  - global ranking is made consistent with man on man ranking
  - group scoring becomes perfectly fair
- This modification could be proposed to the next CIAM conference

**ANY QUESTIONS ?**

